SIN-FM: (A Short Indexed Nomenclature of Family Medicine)

Gary Viner, M.D. C.C.F.P.
Robert M. Bernstein, Ph.D., M.D.,C.M., C.C.F.P.
Gary R. Hollingworth, M.D., F.C.F.P
Medical Informatics Research Group, Clinical Epidemiology Unit,
Department of Family Medicine, University of Ottawa

INTRODUCTION

We have developed a short indexed nomenclature of diagnoses, health problems, and reasons for encounter for use in family practice electronic records. It is in the "WK1" format and can be incorporated in electronic medical records. This defined vocabulary we believe provides some distinct advantages over other vocabularies currently in use.

In family and general practice a nomenclature must cover the breadth of illness, uncertain and ill defined diagnoses, symptoms and reasons for encounter. Current classifications cannot semantically represent these areas precisely. Family physicians cannot use mortality classifications for point of service data entry. ICD-9 and ICHPPC[1] require extensive training to be used effectively whilst ICPC[2] is not specific enough to be used to follow patients.

At a certain point a nomenclature is just large enough to minimize error. If it is too large then different terms may be chosen for the same entity; if too restricted appropriate terms may not exist for some entities, resulting in inaccurate data entry and subsequent inaccurate retrieval.

OBJECTIVES

To be usable at the point of service the vocabulary must be MONOAXIAL, requiring selection of just one term to represent a diagnosis or reason for encounter. It must enable the physician to find terms fast enough so that using the defined vocabulary is inherently preferable to writing free text in the chart. It must strike a balance between comprehensives and usability. It must be small enough so that a provider of care can walk through the hierarchical structure to locate an appropriate term and yet robust enough so that most clinical terms are present and can be found by a simple search algorithm, and for those that are not, another accurate term can be selected via the hierarchy.

The vocabulary must be easy to learn and therefore we have based SIN-FM on ICPC which has been validated for consistency in many international settings. Naive users can learn to use it as a classification without computer aided searching in less than half an hour. With the computer to act as a search instrument and the 10 fold expansion of terms in SIN-FM the new user needs only to know how to use his/her own search software. The need for knowledge of the underlying classification is minimized.

The structure of SIN-FM was designed so that terms are easy to find, thereby minimizing background error in coding (signal to noise). SIN-FM is a clinical nomenclature. Arcane terms which cannot be applied to patients, and terms such as "other diseases of the skin not elsewhere classified" cannot be part of a clinical nomenclature. ALL users have to know what else IS classified in order to interpret such a term.

STRUCTURE OF SIN-FM

ICPC with 3 digit ICD-10 mapped to it[3] was combined with a synonym dictionary and our own local vocabulary (based on ICHPPC). Each ICPC body system chapter was arranged hierarchically in sections of symptoms and complaints, non-specific disorders, infectious/ inflammatory disorders, neoplasms, trauma, and congenital disorders. Terms were then edited to make clinical sense. ICPC main headings and other common or clinically relevant conditions were identified as index terms. Each term (where possible) was identified by body site so that e.g. all symptoms and disorders of the shoulder can sort together. There is consistency from chapter to chapter with respect to the headings, hierarchy and coding scheme. Coding is derivable from the position in the hierarchy.

REFERENCES

1. ICHPPC-2 Defined: International Classification of Health Problems in Primary Care Oxford University Press, Oxford 1983.
2. ICPC: International Classification of Primary Care. ed. Lamberts H, and Wood M. Oxford University Press, Oxford 1987.
3. Obtained with gratitude from Dr. Maurice Wood.